

STATE OF MINNESOTA  
OFFICE OF ADMINISTRATIVE HEARINGS  
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Application for a  
Certificate of Need and Site Permit for the  
High Prairie Wind Farm II Large Wind  
Energy Conversion System

**SUMMARY OF TESTIMONY  
AT PUBLIC HEARINGS**

This matter was initiated with the Minnesota Public Utilities Commission (“MPUC” or the Commission) by High Prairie Wind Farm II, LLC (High Prairie II) on October 6, 2006.<sup>1</sup> On that date, High Prairie II filed an Application for a Certificate of Need (CN) for a 100 megawatt (MW) wind conversion system (“the Project”). On November 22, 2006, High Prairie II filed a Site Permit Application for the Project to be installed in Mower County.<sup>2</sup> On December 11, 2006, the Commission ordered the two matters consolidated and referred the matter to the Office of Administrative Hearings for conducting public hearings under the alternate CN process.<sup>3</sup> Administrative Law Judge (ALJ) Steve M. Mihalchick conducted public hearings in the afternoon and evening of April 4, 2007. The public hearings were held in Grumpy’s Restaurant and Lounge, 204 4<sup>th</sup> Avenue NE, Grand Meadow, Minnesota. The ALJ was present at both hearings and the opportunity was provided for members of the public to air their views regarding the need for, and proposed siting of the wind project. The period for written public comments closed on April 11, 2007.

**Description of the Project**

High Prairie II proposed to install 61 Vestas 1.65 MW wind turbines resulting in a nameplate capacity of 100.65 MW. Each turbine has a hub height of 80 meters (262 ft) and a rotor diameter of 82 meters (269 ft). Each turbine will have a step-up transformer to raise the voltage to the distribution line voltage of 34.5 kilovolts (kV). The electricity generated will be run through approximately 24 miles of underground 34.5 kV electrical

<sup>1</sup> High Prairie II CN Application,  
(<https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3369185>).

<sup>2</sup> High Prairie II Site Permit Application  
(<https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3614832>).

<sup>3</sup> Commission Orders, December 11, 2006  
(<https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3606355> and  
<https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3606354>).

power lines to collect all of the power from the turbines and transmit it to the Project substation. The underground cables are installed in trenches that are approximately 3-4 feet deep, running alongside the Project's roadways. Where two or more sets of underground lines converge, pad-mounted junction panels will be utilized to tie the lines together into one or more sets of larger feeder conductors. The collection system terminates at the Project substation.<sup>4</sup>

At the Project substation, the electrical power from the entire wind plant is stepped-up to 161 kV and is delivered to the interconnection switch at the FPL Energy Mower County Wind Farm via a three-mile transmission line. Installed at the substation are a control house, transformer, outdoor breaker, relaying equipment, high-voltage bus work, steel support structures, and overhead lightning suppression conductors. The substation equipment will be installed on concrete foundations and will consist of a graveled footprint area of approximately two to four acres, a chain link perimeter fence, and an outdoor lighting system.<sup>5</sup>

Additional equipment at the Project site includes two permanent meteorological towers ("met towers") and an Operations and Maintenance ("O&M") facility. Each met tower will be between 50 – 80 meters (164 – 262 ft) tall and be equipped with a grounding system similar to that of the wind turbines. The O&M facility will provide office space for the crews, as well as a shop/storage area for spare parts and vehicles. The structure will also house the Supervisory Control and Data Acquisition (SCADA) system, and will potentially also serve as a visitor center/viewing area.<sup>6</sup>

Each turbine of the Project will be connected to the central SCADA system located in the O&M facility. The connection will be accomplished using a network of underground fiber optic cable or copper signal wire, optically isolated to prevent stray power surges. The SCADA system enables remote control and monitoring of each individual turbines and the wind plant as a whole from both the central host computer and from a remote computer. In the event of faults, the SCADA system can be programmed to send alerts to a fax, pager, or cell phone to notify operations staff.<sup>7</sup>

The Project site is located in Mower County approximately fifteen miles east southeast of the City of Austin and just east of the City of Elkton. The Project occupies approximately 7,900 acres of land within Bennington, Marshall, Grand Meadow, and Clayton Townships.<sup>8</sup>

High Prairie II has negotiated with landowners for the easements needed to install and maintain the turbines and other facilities required for the Project. The Project is anticipated to remove about 1% (82 acres) of the Project area from crop production.<sup>9</sup>

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<sup>4</sup> High Prairie II Site Permit Application, at 14-16.

<sup>5</sup> *Id.* at 16-18.

<sup>6</sup> *Id.* at 18-19.

<sup>7</sup> *Id.* at 18-19.

<sup>8</sup> *Id.* at 1, 6; Map 1.

<sup>9</sup> Ex. 3, at 5.

The Project has filed for a National Pollutant Discharge Elimination System Permit from the Minnesota Pollution Control Agency and a license for crossing public waters and public land from the Minnesota Department of Natural Resources. The Mower County Soil and Water Conservation District has issued a certificate of no net loss of wetlands and the U.S. Army Corps of Engineers has issued a Section 404 wetlands permit. High Prairie II has received a determination of no hazard from the Federal Aviation Administration, with 33 of the 61 turbines displaying a synchronized red flashing warning light. The Federal Energy Regulatory Commission (FERC) has determined that the Project qualifies as an Exempt Wholesale Generator. FERC has issued a Market Based Rate Authorization to the Project.<sup>10</sup>

## Hearing Notices

Notice of the public hearings in this matter was made by publication in the *Austin Daily Herald*. The notice was mailed to landowners, public officials, media outlets, and persons who indicated an interest in CN matters.<sup>11</sup>

Approximately 10 members of the public appeared at the afternoon public hearing and approximately 7 members of the public at the evening hearing. In addition, ten persons were present at both hearing on behalf of the Applicant or a State agency. Several of the attendees offered testimony concerning the Project and related issues. The Administrative Law Judge established a deadline of April 11, 2007 for receipt of written comments from any interested person.

The Commission will issue an Order on High Prairie II's applications for a Certification of Need and a Site Permit after examination of this Summary, the hearing transcripts, all written filings submitted by the public and all filings and arguments submitted by the Applicant, the Minnesota Department of Commerce and other persons and entities interested in this matter.

## Summary of Testimony in Grand Meadow

Jeff Haase, Project Manager with the Department of Commerce's Energy Facilities Permitting Group made a presentation regarding the Department's environmental review for the Project. He also noted the comments that other Department staff had made regarding CN issues.<sup>12</sup>

The environmental review conducted by the Department is summarized in a document entitled *Environmental Report: High Prairie II Wind Project (Environmental Report)*.<sup>13</sup> The *Environmental Report* is a general document discussing the potential human and environmental impacts the Project as well as any alternatives to the Project

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<sup>10</sup> Ex. 3, at 7.

<sup>11</sup> Department of Commerce, *Notice of Public Hearing*, March 20, 2007 (<https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3943819>).

<sup>12</sup> Grand Meadow Afternoon Hearing, Tape 1 (Haase); Ex. 5.

<sup>13</sup> Ex. 7.

as proposed. The Department also assessed possible mitigation of potential adverse effects of the Project.

As part of the *Environmental Report* development process, a public meeting was held on December 14, 2006 to solicit input into the scope of the issues to be addressed in the study. Written comments were solicited, but none were received. On January 18, 2007, the *Environmental Report* Scoping Decision was issued by Commerce.<sup>14</sup>

The *Environmental Report* detailed the work needed to be performed for the Project, potential impacts, and mitigation measures. No significant impacts requiring extraordinary mitigation measures were identified in the *Environmental Report*. Mitigation measures were detailed for the very limited impacts and potential impacts resulting from the installation and operation of the Project.<sup>15</sup>

The Department's review covered: need, preference for renewable and conservation alternatives, cost of alternatives, impacts to the socioeconomic and natural environments, and policy implications. A "no build" alternative, a generic 100 MW large wind energy conversion system, a 38.5 MW biomass facility, and High Prairie II were compared for feasibility and availability. None of the alternatives were determined to offer a viable alternative to the benefits offered by High Prairie II. None of the alternatives had lesser socioeconomic and natural environment impacts than the Project. The Department concluded that the Project posed no significant policy implications.<sup>16</sup>

Based on its assessment, the Department recommended that the Commission approve the Project. Attendees at the public hearing were invited to comment on the Project and on the Department's assessment.

Matt Lacey, Resource Planner for Great River Energy Cooperative (GRE), discussed the anticipated need for electricity among the 28 member cooperatives and 1.7 million customers of those cooperatives. GRE primarily purchases electricity from coal-fired generation plants. Additional electricity is obtained from hydro, natural gas, refuse-derived fuel (RDF), and wind sources. Approximately 3% of GRE's 2006 energy supply is currently obtained through renewable energy sources (RDF and wind).<sup>17</sup>

Between 2007 and 2025, GRE expects to increase its renewable energy sources (primarily wind) to more than half of GRE's total electrical load. Natural gas generation is expected to comprise most of the remaining load, with a small portion derived from coal-fired generating plants. To meet these goals, GRE anticipates a need for 1,300 MW of new wind-generated electricity.<sup>18</sup> Purchasing electricity generated by the Project will also help GRE meet the requirements of the Minnesota Renewable Energy

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<sup>14</sup> Ex. 7, Appendix A (<https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=3840935>).

<sup>15</sup> Ex. 7, at 26-27.

<sup>16</sup> Ex. 7, at 28.

<sup>17</sup> Grand Meadow Afternoon Hearing, Tape 1 (Lacey).

<sup>18</sup> Grand Meadow Afternoon Hearing, Tape 1 (Lacey).

Standard, which requires utilities like GRE to derive 25% of their electricity from renewable sources by the year 2025.<sup>19</sup>

GRE put out a request for proposal (RFP) for new generating sources to meet the anticipated need through 2025. High Prairie II was chosen through the RFP competitive bidding process. Factors favoring High Prairie II include: 1) access to adequate transmission capacity; 2) availability by the end of 2007; 3) geographic diversity to GRE's existing wind resources; and 4) competitive pricing to other wind resources.<sup>20</sup>

Robert Crowell, Development Director for the Project, provided an overview of the planning, design, and potential impacts of the Project. Crowell described the ownership structure of High Prairie II, how the Project furthers State policy, and the reasons for the location, size, and timing of the Project.<sup>21</sup>

Ken Wolf, Regulatory Unit Manager for the Public Utilities Commission, described the permit process and the PUC's role in the considering the applications of High Prairie II.<sup>22</sup>

Joseph Brown, Superintendent of Schools for Grand Meadow (ISD 495), expressed support for the Project. Superintendent Brown sought more information as to how the energy production tax is divided between local units of government and when tax revenue would be paid to the school district. High Prairie II responded that the taxes are 12.5 cents per MW hour paid to the State where the amount is then divided between local units of government with 80% to the county, 14% to the city/township, and 6% to the school district.<sup>23</sup>

Peter Tangren, a landowner in the Project area, expressed his support for the Project. Tangren noted that High Prairie II was easy to work with and fair to the landowners in the Project area. The commentator supported the Project as a means of meeting the renewable energy requirements recently passed into law.<sup>24</sup>

Al Stier, owner of Stier Farms, noted that two and one-half wind towers of the Project were located on his property. Stier expressed his support for the Project and noted that as a customer, he is able to designate the amount of renewable energy in the electricity he consumes. The commentator supported the Project as providing more renewable energy to customers.<sup>25</sup>

Sue Dougan, owner of Dougan Farms, noted that she has been involved in the Project for six years going back to the first phase of wind tower construction in the area. Dougan expressed her support for the Project, especially since the energy being

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<sup>19</sup> Minn. Stat. § 216B.1691 (as amended, 2007 Laws of Minnesota, Chapter 3).

<sup>20</sup> Grand Meadow Afternoon Hearing, Tape 1 (Lacey).

<sup>21</sup> Grand Meadow Afternoon Hearing, Tape 1 (Crowell); Ex. 3.

<sup>22</sup> Grand Meadow Evening Hearing, Tape 1 (Wolf);

<sup>23</sup> Grand Meadow Afternoon Hearing, Tape 1 (Crowell).

<sup>24</sup> Grand Meadow Afternoon Hearing, Tape 1 (Tangren).

<sup>25</sup> Grand Meadow Afternoon Hearing, Tape 1 (Stier).

generated was renewable. She noted that High Prairie II was easy to work with and dealt fairly with the landowners in the Project area. The farmers' needs were taken into account in the implementation of the Project. The community benefits, through increased tax revenue and additional jobs, were also noted by Dougan.<sup>26</sup>

Luverne Hanson expressed his support for the Project as beneficial to the community, local employment, and the environment.<sup>27</sup>

Ron Lee, a landowner in the midst of the Project area, questioned the setback requirements for noise and the rotor diameter separation (RD) for turbines running north and south. One RD is approximately 270 feet. Jeff Haase noted that the final separation distance was shorter than that in the draft site permit. The external setback from the site boundaries is 5 RD on the north-south axis. On the east-west axis, the setback is 2 RD. Haase noted that internal setbacks were subject to change based on the particular requirements for each turbine (described as "micro-siting").<sup>28</sup>

Lee noted that his ability to put up his own turbine would be affected by the distance of High Prairie II turbines, if any of those turbines were located within 15 RD of his proposed turbine location. The nearest proposed turbine site is approximately 1365 feet to the northwest from the Lee property. The next nearest turbine is proposed to be 1,577 feet to the east. A third turbine is proposed to be located a further distance to the south. Lee described the U.S. Department of Agriculture (USDA) rule of thumb for windbreaks as the effects extend for a distance 10 times the height of the windbreak. Lee maintained that using this measure, the impacts of a turbine extend for more than 4,000 feet.<sup>29</sup>

The proposed locations for the turbines are all off of any property owned by Lee and no compensation is required for locating Project facilities on Lee's property. High Prairie II offered compensation in the form of a "neighbor agreement" to compensate Lee for the proximity of the turbines, even though his property is outside of the wind rights zone established by the PUC. That offer was not accepted by Lee. High Prairie II disputed whether the USDA approach to windbreaks applied to turbines, since only a fraction of the wind energy was being affected by the turbine.<sup>30</sup>

Lee also identified the visual impact of the turbines as a negative impact, through the presence of the turbines, the shadows cast by the turbines and blades, and the lights required by the FAA. He noted that High Plains II has offered to plant trees to abate any such impact. Lee maintained the property values would be negatively affected due to the presence of the towers. As an alternative, Lee suggested that the

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<sup>26</sup> Grand Meadow Afternoon Hearing, Tape 1 (Dougan).

<sup>27</sup> Grand Meadow Afternoon Hearing, Tape 1 (Hanson).

<sup>28</sup> Grand Meadow Evening Hearing, Tape 1 (Haase)

<sup>29</sup> Grand Meadow Evening Hearing, Tape 1 (Lee); Ex. 1.

<sup>30</sup> Grand Meadow Evening Hearing, Tapes 1 and 2 (Crowell).

Project use larger turbines, thereby requiring fewer turbines and allowing for larger setbacks.<sup>31</sup>

Crowell responded that the Project was being sited in a region that has been subject to agricultural uses for over 100 years. The visual impact was described as being “in the eye of the beholder,” since the responses to the aesthetics of the turbines have varied. HP II is not aware of any studies showing long-term negative impact on property values. The turbine size proposed for the Project is the optimal size for the anticipated wind resources available in Mower County. These particular turbines are essential to the Project’s ability to begin producing electricity in 2007, which is of critical importance to GRE, the sole customer of the Project. The contracts for the proposed turbines were entered into in 2005 and High Prairie II is presently taking delivery of these turbines.<sup>32</sup>

The economic impact on Mower County and the local units of government was questioned by Lee. The loss of sales tax, through the Project’s exemption from that tax, was identified as an impact that should be considered. Crowell responded that all large wind energy conversion projects are statutorily exempt from sales tax and there is no different treatment required for High Prairie II. Regarding employment, Crowell estimated a construction workforce of approximately 100 people, and anticipated that local labor would be hired for construction. Long-term, O&M typically requires one employee for every 10 wind turbines. Between 9 and 12 employees are anticipated for the scope of the High Prairie II project.<sup>33</sup>

Dale Bergland, a landowner in the Project area, also indicated that his property value would be affected. He also noted that adverse affects would be experienced by residents during the construction phase of the Project. Bergland related that a wind turbine experienced a fire and expressed concern about the hazards faced by landowners and firefighters in that situation. Crowell responded that local fire departments were arranging with a fire department that was equipped to deal with fires at the top of the wind turbine tower. High Prairie II has been working with local fire departments to obtain equipment needed to address turbine fires.<sup>34</sup>

Al Sweetser, Pennington Town Board Member, noted that the Project would be generating significant revenues to the Town. The only question was regarding when the revenue would be received.

## **Summary of Written Comments**

Robert Crowell of High Plains II submitted a written comment. The comment noted the wide support expressed for the Project and responded more fully to questions raised at the public hearings. Regarding setbacks, High Plains II reiterated that the

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<sup>31</sup> Grand Meadow Evening Hearing, Tapes 1 and 2 (Lee);

<sup>32</sup> Grand Meadow Evening Hearing, Tape 2 (Crowell).

<sup>33</sup> Grand Meadow Evening Hearing, Tape 2 (Crowell).

<sup>34</sup> Grand Meadow Evening Hearing, Tape 2 (Crowell).

nearest turbine location to Mr. Lee's property was over 5 RDs away, which complies with the standards of the draft Permit.<sup>35</sup>

High Prairie II noted its standing offer to work with Mr. Lee on the installation of additional landscaping on his property to reduce the visual impact of the Project. Similarly, High Prairie has offered Mr. Lee its standard agreement with the same terms and conditions offered to all landowners within the Project area, even though his property is located outside the wind access buffer identified in the Department's Draft Permit. While the location of the property means that High Prairie II is not obligated to provide compensation, the offer reflects High Prairie II's efforts to work with landowners to reach accommodation regarding impacts of the Project.<sup>36</sup>

Regarding economic impact issues, High Prairie II noted that an energy production tax is collected and distributed to local governments. Also, additional jobs are created in the region. With the tax revenue providing additional investment in the local community, High Prairie II maintains that any potential reduction in property values would be offset by such positive economic development in the area.<sup>37</sup>

As to the question whether larger turbines could be utilized to reduce the number of turbines sited, High Prairie II repeated that turbines selected for the project take into consideration both the site characteristics and turbine availability. High Prairie II also noted that the 40 turbine 100 MW FPLE Mower County Wind Farm utilizes larger turbines, which are spread over a similarly sized geographic area. High Prairie II explained that turbine separations are determined through the optimizing the effective use of the wind resource, while preventing interference and air turbulence between turbines that could shorten the effective life of the turbines.<sup>38</sup>

No other written comments from the public were received.

Dated this 16th day of April, 2007.

/s/ Steve M. Mihalchick  
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STEVE M. MIHALCHICK  
Administrative Law Judge

Reported:    Taped: Two Tapes, No Transcript Prepared

<sup>35</sup> High Prairie II Comment, April 11, 2007  
(<https://www.edockets.state.mn.us/EFiling/ShowFile.do?DocNumber=4021031> ).

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*